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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/776,513
Filing Date: February 12, 2004
Appellant(s): TAMMI ET AL.

Nokia Siemens Networks Oy of Espoo, Finland
Keith M. Mullervy
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 5, 2009 appealing from the Office action mailed September 3, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

"3rd Generation Partnership Project; Technical Specification Group Services and

System Aspects; IP Multimedia Subsystem (IMS); Stage 2 (Release 5)" 3GPP TS 23.228 V6.0.0, January 2003 (2003-01), pages 1-128, XP-002279519. Jan, 2003

US Publication 2002/0194336 to Kett et al. Dec. 19, 2002

(9) Grounds of Rejection

1. Claims 1-6 and 8-36 are rejected under 35 U.S.C. 103 (a) as being unpatentable over "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; IP Multimedia Subsystem (IMS); Stage 2 (Release 5)" 3GPP TS 23.228 V6.0.0, January 2003 (2003-01), pages 1-128, XP-002279519 from Applicant's IDS submitted on 16 December, 2004 (3GPP hereinafter) in view of US Patent Application Publication US 2002/0194336 to Kett et al (Kett hereinafter).

Regarding claims 1, 8, 20, 25, 32 and 34-36, 3GPP teaches **a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services, the method comprising: monitoring a status of a service account** (3GPP , Pg. 43, sec. 5.3.2.2.2, line 1; "A service platform may determine a need to clear a user's SIP registration."); **forwarding a request for de-registration from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber** (3GPP , pg. 43, fig. 5.5a; a deregistration request is forwarded from the service platform to the S-CSCF, P-CSCF, UE AND finally to the HSS, which contains the registration information of the user i.e. subscriber.),

upon determining that disruption or termination of service is required (3GPP , Pg. 43, sec. 5.3.2.2.2, line 1; "A service platform may determine a need to clear a user's SIP registration," i.e. reason for the disruption or termination of service.)**; and changing the registration status of said subscriber so as to de-register said subscriber at said registration server in response to said de-registration request** (3GPP , pg. 41, step 3 and pg. 44, step 6; based on the operator choice, the S-CSCF can change the registration status from registered to unregistered.)**.**

3GPP does not explicitly teach connecting from an application server to a registration server **via a direct interface.** Kett teaches **via a direct interface** (fig. 1, a registration server 5 is connected to a service node 6a, 6b, 6c running an application, i.e. application server via a direct interface of a core network 2; pg. 2, par. 27). Kett and 3GPP are analogous art because they are from the same field of endeavor of network communication. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Kett's direct interface connection with 3GPP's IP Multimedia Subsystem. The suggestion/motivation would have been to improve the function and performance of API implementation in a communication network (Kett, pg. 1, par. 15-17). Furthermore, to provide the 3GPP's IP Multimedia Subsystem with a direct interface connection would have been obvious to one of ordinary skill in the art, in view of the teachings of Kett, since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art at the

time of the invention.

Regarding claims 2, 18 and 21 3GPP-Kett discloses the invention substantially as described in claims 1, 11 and 20 including, **wherein said forwarding step comprises forwarding said request** (3GPP , pg. 43, fig. 5.5a; a deregistration request is forwarded from the service platform to the S-CSCF, P-CSCF, UE AND finally to the HSS i.e. registration server, which contains the registration information of the user i.e. subscriber.) **over said interface directly coupling said application server and said registration server** (3GPP , Pg. 14-17, sec. 4.2.4 details the interface between the S-CSCS, application server, and the HSS i.e. registration server.).

Regarding claims 3,12, 22 and 28 3GPP-Kett discloses the invention substantially as described in claims 1 , 11, 20 and 27 including, **wherein said forwarding comprises forwarding said request to said registration server comprising a home subscriber server of an internet protocol multimedia subsystem** (3GPP , pg. 43, fig. 5.5a; a deregistration request is forwarded from the service platform to the S-CSCF, P-CSCF, UE AND finally to the HSS i.e. home subscriber server, i.e. registration server, which contains the registration information of the user i.e. subscriber. Pg. 14-17, sec. 4.2.4 details the interface between the S-CSCS, application server, and the HSS i.e. registration server.).

Regarding claims 4, 19 and 23 3GPP-Kett discloses the invention substantially as described in claims 3, 12 and 22 above including, **wherein said forwarding comprises forwarding said request over said interface comprising an Sh reference point** (3GPP , pg. 43, fig. 5.5a; a deregistration request is forwarded from the

service platform to the S-CSCF, P-CSCF, UE AND finally to the HSS i.e. home subscriber server, i.e. registration server, which contains the registration information of the user i.e. subscriber. Pg. 16-17, sec. 4.2.4a details the interface comprising a Sh interface).

Regarding claims 5, 13, 24 and 29, 3GPP-Kett discloses the invention substantially as described in claims 3, 12, 22 and 28 above including, **wherein said forwarding comprises forwarding said request in a profile update request command** (3GPP , pg. 44, step 6; S-CSCF sends an update to the HSS to remove itself as the registered S-CSCF for this user.).

Regarding claims 6 and 26, 3GPP-Kett discloses the invention substantially as described in claims 5 and 25 above including, **further comprising indicating de-registration by setting an updated registration status to a predetermined value** (3GPP , pg. 39, sec. 5.3.1, par. 1; "De-registration is accomplished by a registration with an expiration time of zero seconds", i.e. a predetermined value.).

Regarding claims 9 and 33, 3GPP-Kett discloses the invention substantially as described in claims 8 and 32 above including, **wherein said registration server is a home subscriber server** (3GPP, pg. 43, fig. 5.5a; a deregistration request is forwarded from the service platform to the S-CSCF, P-CSCF, UE AND finally to the HSS i.e. home subscriber server, i.e. registration server, which contains the registration information of the user i.e. subscriber. Pg. 14-17, sec. 4.2.4 details the interface between the S-CSCS, application server, and the HSS i.e. registration server.).

Regarding claims 10, 3GPP-Kett discloses the invention substantially as

described in claims 8 above including, **wherein said signaling network comprises an internet protocol multimedia subsystem** (3GPP , pg. 43, sec. 5.3.2.2.2, fig. 5.5a; the flow diagram shows a service control initiated Internet protocol Multimedia Subsystem terminal application.).

Regarding claims 11, 16-17 and 27, 3GPP teaches **a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services, the method comprising: monitoring a status of said service account** (3GPP , Pg. 43, sec. 5.3.2.2.2, line 1; "A service platform may determine a need to clear a user's SIP registration."); **forwarding a request for barring from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber** (3GPP , pg. 43, fig. 5.5a; a deregistration request is forwarded from the service platform to the S-CSCF, P-CSCF, UE AND finally to the HSS, which contains the registration information of the user i.e. subscriber.), **upon determining that disruption or termination of service is required** (3GPP , Pg. 43, sec. 5.3.2.2.2, line 1; "A service platform may determine a need to clear a user's SIP registration," i.e. reason for the disruption or termination of service.); **and changing a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request** (3GPP , pg. 41, step 3 and pg. 44, step 6; based on the operator choice, the S-CSCF can change the registration status from registered to unregistered.).

3GPP does not explicitly teach connecting from an application server to a registration server **via a direct interface.** Kett teaches **via a direct interface** (fig. 1, a registration server 5 is connected to a service node 6a, 6b, 6c running an application, i.e. application server via a direct interface of a core network 2; pg. 2, par. 27). Kett and 3GPP are analogous art because they are from the same field of endeavor of network communication. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Kett's direct interface connection with 3GPP's IP Multimedia Subsystem. The suggestion/motivation would have been to improve the function and performance of API implementation in a communication network (Kett, pg. 1, par. 15-17). Furthermore, to provide the 3GPP's IP Multimedia Subsystem with a direct interface connection would have been obvious to one of ordinary skill in the art, in view of the teachings of Kett, since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art at the time of the invention.

Regarding claims 14 and 31, 3GPP-Kett discloses the invention substantially as described in claims 13 and 30 above including, **further comprising indicating barring by adding the barring indication to a definition of a public identity** (3GPP , Pg. 33, sec. 5.2.1, step 7; the HSS supports the barring of public user identity.)**.**

Regarding claims 15 and 30, 3GPP **teaches a system for deactivating a service account of a registered subscriber within a signaling network supporting**

internet protocol based services, said system comprising: a registration server configured to maintain a registration status of said subscriber (3GPP, Pg. 41, sec. 5.3.2, heading: subscription management; the network manages the subscriber's access to the network based on the current registration status. The HSS maintains registration information.)**; and an application server, to which said service account is associated** (3GPP , Pg. 14-17, sec. 4.2.4 details the interface between the S-CSCF, application server, and the HSS i.e. registration server.)**, configured to monitor a status of said service account** (3GPP , Pg. 43, sec. 5.3.2.2.2, line 1; "A service platform may determine a need to clear a user's SIP registration.") **and to forward via a direct interface a request for barring to said registration server** (3GPP , pg. 43, fig. 5.5a; a deregistration request is forwarded from the service platform to the S-CSCF, P-CSCF, UE AND finally to the HSS, which contains the registration information of the user i.e. subscriber, and the S-CSCF. Pg. 35, fig. 5.1, a registration request is forwarded from the UE the P-CSCF, I-CSCF, HSS, which contains the registration information of the user i.e. subscriber, and the S-CSCF. Pg. 26, S-CSCFs reject IMS communication to/from public user identities that are barred from IMS communication after completion of registrations.)**, upon determining that disruption or termination of service is required** (3GPP , Pg. 43, sec. 5.3.2.2.2, line 1; "A service platform may determine a need to clear a user's SIP registration," i.e. reason for the disruption or termination of service.)**, wherein said registration server is configured to change a barring indication of said subscriber to bar said subscriber in response to said barring request** (3GPP , pg. 33, sec. 5.2.1a, step 4; when one of the public user

identities within the de-registered, all public user identities that have been implicitly registered are de-registered at the same time. Pg. 41, step 3 and pg. 44, step 6; based on the operator choice, the S-CSCF can change the registration status from registered to unregistered.).

3GPP does not explicitly teach connecting from an application server to a registration server **via a direct interface.** Kett teaches **via a direct interface** (fig. 1, a registration server 5 is connected to a service node 6a, 6b, 6c running an application, i.e. application server via a direct interface of a core network 2; pg. 2, par. 27). Kett and 3GPP are analogous art because they are from the same field of endeavor of network communication. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Kett's direct interface connection with 3GPP's IP Multimedia Subsystem. The suggestion/motivation would have been to improve the function and performance of API implementation in a communication network (Kett, pg. 1, par. 15-17). Furthermore, to provide the 3GPP's IP Multimedia Subsystem with a direct interface connection would have been obvious to one of ordinary skill in the art, in view of the teachings of Kett, since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art at the time of the invention.

(10) Response to Argument

The examiner summarizes the various points raised by the appellant, combines similar arguments, and addresses replies individually.

As per appellant's argument that:

(1) Regarding the rejection of claims 1, 8, 20, 25, 32 and 34-36, appellant argues that 3GPP-Kett does not teach any type of direct interface between the claimed application server and the claimed registration server. Appellant further argues that 3GPP-Kett the Final Office Action's statement that one of ordinary skill in the art would be motivated to combine the references of 3GPP and Kett fails to take into account the substantial differences between Kett and the claimed invention, specifically the fact that Kett teaches a registration procedure and an API implementation, not the claimed de-registration procedure and direct interface. Furthermore, the Appellant further argues that the combination does not teach "forwarding a request…via a direct interface."

In reply to argument (1), examiner asserts firstly that Kett clearly teaches the direct interface between an application server and a registration server. Figure 1 and the associated text describing the figure describe a registration server connected to a service node 6a, 6b, 6c running an application, (examiner interprets the service node to be functionally equivalent to the claimed application server) via a direct interface of a core network 2 (Kett, pg. 2, par. 27). The absence of a specific definition in the specification of "via a direct interface" forces the examiner to accept the plain meaning in the broadest and most reasonable interpretation of what is well known in the art. As such, the examiner interprets "via a direct interface" to mean directly connecting the

registration server to the application server via any "interface," i.e. *the point at which a connection is made between two elements so that they can work with each other or exchange information; software that enables a program to work with the user (the user interface, which can be a command-line interface, menu-driven interface, or a graphical user interface), with another program such as the operating system, or with the computer's hardware, application programming interface, graphical user interface; a card, plug, or other device that connects pieces of hardware with the computer so that information can be moved from place to place, i.e. standardized interfaces such as RS-232-C standard and SCSI enable communications between computers and printers or disks, etc.* (Microsoft Computer Dictionary, Fifth Edition, May 2002, definition of "interface"). This definition of interface includes any application programming interface, i.e. API implementation, which includes the implementation taught in Kett.

Examiner also notes that Kett is not relied upon to teach de-registration. Furthermore, to provide the 3GPP's IP Multimedia Subsystem with a direct interface connection would have been obvious to one of ordinary skill in the art, in view of the teachings of Kett, since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art at the time of the invention.

Examiner further asserts that 3GPP clearly teaches forwarding a request… (pg. 43, fig. 5.5a; a deregistration request is forwarded from the service platform to the S-

CSCF, P-CSCF, UE AND finally to the HSS, which contains the registration information of the user i.e. subscriber). Kett is relied upon to teach "via a direct interface" as thoroughly stated above.

(2) Regarding the rejection of claims 2, 18, and 21, appellant argues that 3GPP-Kett does not teach or describe the limitation "wherein said forwarding step comprises forwarding said request over said interface directly coupling said application server and said registration server." Appellant further argues that 3GPP-Kett fails to teach or describe a registration message being sent over the Sh and Si interfaces.

In reply to argument (2), examiner asserts 3GPP clearly teaches a de-registration forwarding step using Sh and Si interfaces. Regarding the de-registration forwarding step, 3GPP discloses a deregistration request is forwarded from the service platform to the S-CSCF, P-CSCF, UE AND finally to the HSS i.e. registration server, which contains the registration information of the user i.e. subscriber (pg. 43, fig. 5.5a). 3GPP explicitly describes the registration server to application server interface communication in the description of the HSS to service platform interface (pg. 16-17, section 4.2.4a). When describing this communication, 3GPP explicitly states, "The "application server" (SIP Application Server and/or the OSA service capability server and/or IM-SSF) may communicate to the HSS. The Sh and Si interfaces are used for this purpose." 3GPP also discloses the use of the Si interface to transport subscription, i.e. registered users, i.e. registration information to the registration server.

(3) Regarding the rejection of claims 11, 16-17, and 27, appellant argues that 3GPP-Kett does not teach or suggest "forwarding a request for barring from said

application server via a direct interface to a registration server" for similar reasons as to why the combination of 3GPP-Kett fails to teach "forward a request for de-registration from said application server via a direct interface" in claims 1, 8, 20, 25, 32 and 34-36.

In reply to argument (3), examiner asserts the same arguments used to respond to (1).

(4) Regarding the rejection of claims 15 and 30, appellant argues that 3GPP-Kett does not teach or suggest "an application server, to which said service account is associated, configured to monitor a status of said service account and to forward via a direct interface a request for barring to said registration server" for similar reasons as to why the combination of 3GPP-Kett fails to teach "forward a request for de-registration from said application server via a direct interface" in claims 1, 8, 20, 25, 32 and 34-36.

In reply to argument (4), examiner asserts the same arguments used to respond to (1).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Tariq S Najee-ullah/

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